

## **REMARKS**

Claims 1-16 are pending in the application. Claim 13 has been canceled without prejudice or disclaimer of subject matter recited therein. Applicants would like to thank the Examiner for identifying the allowable subject matter.

### **Objections to the Specification**

The specification has been objected to for certain informalities. The specification has been amended to remove the informalities.

### **Rejections under 35 USC §112**

Claims 7-12 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse these rejections.

The subject matter claimed in claim 7 is described on page 12, lines 20-28 of the specification in relation to figures 3A-3B ("angle rotation of a current symbol relative to a previous symbol caused by the channel distortion"). Applicants believe that the description is sufficient for one skilled in the relevant art to reasonably understand the subject matter. Applicants respectfully request the withdrawal of the rejections of claims 7-12 under 35 USC §112, first paragraph.

### **Rejections under 35 USC §102(a)**

Claims 1 and 7 are rejected under 35 USC §102(a) as being anticipated by Rafie et al. (U.S. 2002/0126748 A1). Applicants respectfully traverse these rejections.

Rafie et al. do not anticipate claims 1 and 7. To anticipate a claim, the reference must teach every element of the claims. See MPEP §2131. In the cited section, Rafie et al. does not describe deriving set of values that are a function of the carrier frequency and phase offset to be estimated. Further, Rafie et al. does not describe processing the values to determine estimates of

the carrier frequency and phase offsets as recited in claim 1. In contrast, Rafie et al. states that “[t]he symbol epoch and carrier frequency values are estimated in advance and independently of carrier phase and are accurately tracked between bursts.” (page 4, paragraph 0044, emphasis added). Thus, Rafie et al. does not teach each and every element of claim 1. Accordingly, claim 1 is not anticipated by Rafie et al. and claim 1 is patentably distinguishable from the cited reference.

Claim 7 is rejected in the manner of claim 1, which has been distinguished from Rafie et al. for failing to disclose determining estimates of the carrier frequency and phase offsets. Accordingly, claim 7 is also patentably distinguishable from Rafie et al. for at least the same reasons as claim 1.

Further, the Examiner has not cited any section in Rafie et al. describing estimating the carrier phase and frequency offsets by curve fitting the unmodulated angular sequence as recited in claim 7. Accordingly, Rafie et al. does not teach each and every element of claim 7 as required to anticipate under 35 USC §102(a). Therefore, claim 7 is further patentably distinguishable from Rafie et al.

#### Rejections under USC §103(a)

Claims 3 and 8 are rejected under 35 USC §103(a) as being unpatentable over Rafie et al. (U.S. 2002/0126748 A1) in view of Montreuil (US 5, 960, 044). Applicants respectfully traverse these rejections.

Claim 3 depends from claim 1, which has been distinguished from Rafie et al. for failing to disclose determining estimates of the carrier frequency and phase offsets. Therefore, the combination of Rafie et al. and Montreuil cannot render claim 3 obvious. Accordingly, claim 3 is patentably distinguishable from the cited references for at least the same reasons as claim 1. Similarly, claim 8 depends from claim 7, which has been further distinguished from Rafie et al. for failing to disclose estimating the carrier phase and frequency offsets by curve fitting the unmodulated angular sequence. Accordingly, claim 8 is further patentably distinguishable from the cited references for at least the same reasons as claim 7.

Claims 4 and 9 are rejected under 35 USC §103(a) as being unpatentable over Rafie et al. (U.S. 2002/0126748 A1) in view of Dobrica (U.S. 5,875,215) . Applicants respectfully traverse these rejections.

Claim 4 depends from claim 1, which has been distinguished from Rafie et al. for failing to disclose determining estimates of the carrier frequency and phase offsets. Therefore, the combination of Rafie et al. and Dobrica cannot render claim 4 obvious. Accordingly, claim 4 is patentably distinguishable from the cited references for at least the same reasons as claim 1. Similarly, claim 9 depends from claim 7, which has been further distinguished from Rafie et al. for failing to disclose estimating the carrier phase and frequency offsets by curve fitting the unmodulated angular sequence. Accordingly, claim 9 is further patentably distinguishable from the cited references for at least the same reasons as claim 7.

Claims 5, 10, 13, and 16 are rejected under 35 USC 103(a) as being unpatentable over Rafies et al. (U.S. 2002/0126748 A1) in view of Li et al. (U.S. 6,031,880) . Applicants respectfully traverse these rejections.

Claim 5 depends from claim 1, which has been distinguished from Rafie et al. for failing to disclose determining estimates of the carrier frequency and phase offsets. Therefore, the combination of Rafie et al. and Li et al. cannot render claim 5 obvious. Accordingly, claim 5 is patentably distinguishable from the cited references for at least the same reasons as claim 1. Similarly, claim 10 depends from claim 7, which has been further distinguished from Rafie et al. for failing to disclose estimating the carrier phase and frequency offsets by curve fitting the unmodulated angular sequence. Accordingly, claim 10 is further patentably distinguishable from the cited references for at least the same reasons as claim 7.

Claim 13 has been canceled thus its rejection has been rendered moot.

Claim 16 now depends from amended claim 14, which has been indicated by the Examiner to be allowable.

Claims 6 and 11 are rejected under 35 USC 103(a) as being unpatentable over Rafies et al. (U.S. 2002/0126748 A1) in view of Denno et al. (U.S. 5,287,067) . Applicants respectfully traverse these rejections.

Claim 6 depends from claim 1, which has been distinguished from Rafie et al. for failing to disclose determining estimates of the carrier frequency and phase offsets. Therefore, the combination of Rafie et al. and Denno et al. cannot render claim 6 obvious. Accordingly, claim 6 is patentably distinguishable from the cited references for at least the same reasons as claim 1. Similarly, claim 11 depends from claim 7, which has been further distinguished from Rafie et al. for failing to disclose estimating the carrier phase and frequency offsets by curve fitting the unmodulated angular sequence. Accordingly, claim 11 is further patentably distinguishable from the cited references for at least the same reasons as claim 7.

Applicant believes this application and the claims herein to be in a condition for allowance. Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicant.

Respectfully submitted,



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